ABSTRACT

A method for reducing phase noise and distortion in a digitally converted image in which only a selected subset of the video frames that represent the image are displayed. The selected subset is comprised of reference video frames, where a new reference frame is captured for display after determining that a pixel of an inbound video frame exceeds a certain threshold of change as compared to a corresponding pixel of a previously captured reference frame. The pixel comparison is performed by comparing corresponding numerical values representing each of the pixel's color values, red, green, and blue, or by comparing corresponding numerical values representing a composite color value. The threshold determination is performed by comparing the absolute value of the difference between each of the corresponding pixel values to a pre-selected change threshold value. After determining that the threshold has been exceeded, the next consecutive inbound frame is captured and stored in a frame buffer memory as a new reference frame. All of the stored reference frames are transmitted from the frame buffer memory for display to a display object in accordance with the display object's frame refresh rate. The threshold value is pre-selected to eliminate the intervening sub-threshold inbound frames causing the phase noise and distortion, which not only improves the quality of the displayed image but also reduces the total number of new frames that must be transmitted to the display object.